



## Clinical Practice Guidelines

*The Population Health and Healthcare Epidemiology section of the Navy Environmental Health Center (NEHC) provides support, training, and guidance to Navy and Marine Corps personnel involved with programs that focus on the improvement of health for groups as opposed to treatment of individuals.*

**Clinical Practice Guidelines** are systematically developed statements to assist patients and providers in choosing appropriate health care for specific clinical conditions. At this time Navy MTFs may use either DoD/VA developed guidelines or those guidelines licensed for use from Group Health Cooperative. Both are described below:

### DoD/VA Guidelines:

The Military Health System (MHS) and the Veteran's Healthcare Administration have developed a variety of Clinical Practice Guidelines (CPGs) to support condition management. As each CPG is completed, a "tool-kit" is also compiled to aid implementation of the practice changes described in the CPG. Tool-kits contain copies of the particular CPG, clinician and patient educational materials, videos, CD-ROMs, and clinical process or system support tools. The Army Medical Department (AMEDD), as the DoD lead agent for CPGs, has produced tool-kits for asthma, diabetes, low back pain, tobacco use cessation, and substance use. You can view the DoD/VA guidelines and a variety of tool-kit materials at:

<https://bumed.med.navy.mil/med03/ebm/Links.htm> on the BUMED Intranet site or <http://www.cs.amedd.army.mil/qmo/pguide.htm>.

Note: As of April 2002 the Army has stated that the supply of DoD/VA toolkits has been exhausted. Pending future funding, MTFs may download any DoD/VA guideline materials, which are available in formats ready for local reproduction.

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### Group Health Cooperative:

The Navy has purchased a license to use all materials from the Group Health Cooperative guidelines. These can be viewed at

<https://bumed.med.navy.mil/med03/ebm/Guidelines/glines.html>

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| <ul style="list-style-type: none"><li>• Ankle Injury, Acute</li><li>• Asthma</li><li>• Breast Cancer Screening</li><li>• Cardiovascular Disease, Primary Prevention</li><li>• Cervical Cancer Prevention</li><li>• Chlamydia Screening and Treatment</li><li>• Colorectal Cancer Screening</li><li>• Coronary Heart Disease, Secondary Prevention</li><li>• Deep Vein Thrombosis Treatment</li><li>• Depression, Adult</li><li>• Guidelines for Patients with Diabetes</li><li>• Dyspepsia</li><li>• Dysuria in Women</li><li>• Headache (Acute Treatment</li></ul> | <ul style="list-style-type: none"><li>• Heart Failure</li><li>• Hepatitis C</li><li>• Immunization, Childhood</li><li>• Influenza Vaccine, Adult &amp; Child</li><li>• Knee Injury (Acute) X-Ray Ordering</li><li>• Nutrition</li><li>• Osteoporosis</li><li>• Otitis Media Guidelines</li><li>• Pneumococcal Polysaccharide Vaccine, Adult &amp; Child</li><li>• Prostate Cancer Screening</li><li>• Sinus Symptoms, Acute</li><li>• Tobacco Cessation</li><li>• Venous Ulcer Care</li></ul> |
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### Overview to Clinical Practice Guidelines:

Clinical Practice Guidelines (CPGs) are one tool for an evidence-based approach to improving clinical practice that can maximize outcomes for a particular population in a healthcare environment that has limited resources. (Encl)

$$\text{Value} = \text{Outcomes} / \text{Dollars}$$

Healthcare organizations realize that gaps frequently exist between current clinical practice and optimal practice. An evidence-based approach can help reduce those gaps pertaining to key areas of:

- Clinical health status
- Patient and provider satisfaction
- Cost / utilization

Note: The objective for including a chapter on clinical practice guidelines in the Navy and Marine Corps Population Health Improvement Guide is to provide MTF staff assigned to positions that address condition management or population health with an overview of the principles and strategies for implementation of CPGs. While some providers may have extensive knowledge and experience with CPGs, others do not. This overview does not duplicate the detailed information that is contained in each of the DoD/VA toolkits or the Group Health Implementation Manual; rather, it highlights the essential principles and rationale of CPGs.

### Why do practice gaps exist?

The amount of information needed by providers on a routine basis is vast. In addition, available information may either be inaccurate or out of date. Medical information tools such as CPGs can provide information on condition management that is both complete and current.

In addition to the difficulty of assessing the current validity of treatment information, traditional medicine has often relied upon unsystematic approaches toward condition management, utilizing anecdote and expert opinion, clinical intuition, “pathophysiologic rationale”, and “possible benefit” when treating



patients. Conversely, evidence-based medicine develops statements based on the best available evidence from clinical studies to assist providers and patients in making decisions about their conditions.

### How valid are the recommendations contained in the Guidelines?

Recommendations are based on the strength of the evidence of effectiveness found through a systematic literature review process. A determination that evidence is insufficient should not be confused with evidence of ineffectiveness. A recommendation of insufficient evidence may reveal gaps in the findings where future prevention research is needed. Decision makers should consider these evidence-based recommendations and local needs, goals, and constraints when choosing appropriate interventions.

### Do CPGs replace clinical judgment or force patients and providers to accept guideline recommendations?

Even though the weight of the evidence is at the center of CPG recommendations, clinical expertise remains a vital component of the patient encounter, and patient preferences and values remain paramount. CPGs are not meant to replace clinical expertise or to mandate uniform treatment in every instance; nor are they to be used as a tool to coerce patients. Individual patient values may strongly influence the acceptability of CPG recommendations. Rather, the major purpose of CPGs is to inform both providers and patients as to what has been shown to be effective in the medical literature. Choosing appropriate healthcare for specific conditions remains a shared decision between patients and their providers.

Some providers may resist CPGs initially, but come to accept them later when their peers both endorse them and demonstrate favorable outcomes as a result of utilizing the recommendations.

### What are the objectives of an evidence-based approach to healthcare?

Evidence-based medicine can:

- Decrease variation in clinical care (not explained by disease incidence, resource availability or patient preference)
- Improve the probability of desired outcomes
- Decrease inappropriate tests and interventions
- Meet NCQA and JCAHO requirements for adopting and using clinical guidelines or explicit criteria based on reasonable scientific evidence

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Guidelines from either Group Health, Inc. or the DoD/VA program will contain a fairly complete package that can be adapted to each local MTF. This eliminates the need to research the literature and define what the evidence states about management of specific conditions and provides metrics that can be used throughout the Navy that can be used for comparison purposes.



*Healthcare costs will be cut by  
insiders using a scalpel or by  
outsiders using a meat cleaver.  
David Eddy*

### Guideline Selection:

Navy MTFs are encouraged to initially select one or two Guidelines that address their local needs. They are encouraged to select a CPG that will not require a great amount of effort to implement. Doing so will provide the staff with experience and confidence in implementing CPGs. For example, the Tobacco Use Cessation (TUC) and Dysuria (Group Health) guidelines are relatively easy to implement and evaluate. Sites find that adopting subsequent guidelines becomes easier and more accepted by the staff when the initial experience is positive.

The decision to adopt a particular CPG will usually be made by the MTF leadership when they decide to incorporate CPGs into their clinical improvement/optimization plan. Selection of a CPG can be based on many factors and remains at the discretion of the Commanding Officer of the MTF. Some selection criteria would include:

- High cost
- High utilization
- High Concern

### Implementation Strategy:

Implementation of a CPG entails examining current practices and the clinical status of enrolled members, assessing whether a gap exists between current and desired outcomes, and instituting systematic approaches that have been shown to produce clinical improvements.

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Prior to implementation of any clinical practice guideline, consider conducting a baseline assessment of your patient population:

- What is the perceived performance gap to be closed by this initiative?
- How many individuals do you care for with a condition, e.g., diabetes, asthma, tobacco use or low back pain? What are the demographics of this population?
- What is the current demand and cost for existing medical visits, inpatient admissions, and medications for this population?
- What changes do you project in numbers, demographics, or morbidity of this population over the next 5 to 10 years?
- Is the command ready to implement this guideline?
  - ESC buy-in for the project?
  - Implementation Team identified?
  - Physician Champion identified?
  - Driving & restraining forces identified?
- What strategies will you use to implement this guideline?
- What outcome measures (both process outcomes and health outcomes) will be used to demonstrate success? How will you determine return on investment?

The key to successful implementation of CPGs at the local MTF consists of two elements:

1. Obtaining buy-in from the staff:
  - Use opinion leaders
  - Educate staff
  - Focus on local implications
  - Include all staff levels
  - Focus on improving patient outcomes
  - Use of data
2. Ensuring that clinical and administrative systems are in place to facilitate staff adherence to the guideline
  - Emphasize systems over individual behavior
  - Understand current processes
  - Identify needed change
  - Involve a variety of staff members in changing systems
  - Use process data to measure change

Successfully implementing guidelines is similar to implementing other programs that are population health based, i.e., they all require command support, delegation of authority, effective teamwork strategies, detailed planning for implementing the various phases and components of the program, and an evaluation component. A review of the [“Initial Planning and Design”](#) in the Navy Population Health Improvement Plan may be helpful as a review of these principles.

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### Measurement:

Guidelines from DoD/VA or Group Health contain appropriate metrics that MTFs can select to monitor their success. It is desirable for the MTF to select metrics that evaluate the entire course of CPG implementation:

- Process measures—assess whether actions specified in the MTF implementation plan are actually taking place, e.g., has the necessary staff training occurred, have patient and provider education and reference materials been obtained and put in place, have clinic protocols been amended to reflect new procedures related to the CPG?
- Utilization measures—assess the occurrence of actions designed to correct the problem, e.g., how often do patients receive diagnostic tests, procedures, and referrals recommended by the CPG and what are the costs?
- Outcome measures—assess the impact of CPGs on quality of care, e.g., how satisfied are the patients, how much did clinical outcomes improve for the group being managed in accordance with guideline recommendations?

As soon as the MTF has selected a guideline and metrics, it must decide how it will gather data to measure process, utilization, and outcomes. Each MTF will vary in its capacity to collect and analyze data, but all should be able to adequately assess their programs.

MTF **automated information systems** include information on enrollment numbers and status, encounters for outpatient visits and inpatient stays, prescription drugs, use of ancillary services (laboratory, radiology, physical therapy). Data from these sources presents valuable information on current status of the enrolled population, utilization of resources for condition management, and trends. These indicators can be monitored on a regular basis because they rely on the automated encounter data maintained by DoD and VA treatment facilities. However, other data sources are required to evaluate the impact of the CPG on patients' clinical status.

**Special studies** of clinical data, which collect information recorded in patients' medical charts and in some automated systems, or gathers information reported by patients in surveys, provides detailed information on clinical status, clinical improvement, and clinician assessment of required interventions. Special studies may be more costly and time-consuming, but are essential to determine effectiveness of the guideline. DoD may conduct some of these special studies to evaluate the system-wide effectiveness of CPGs.

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Data Collection Method	Advantages	Disadvantages
<b>Administrative Data</b>		
Encounter Data (e.g., CHCS, ADS)	Low cost; readily available	Inconsistent coding, data not available for many measures
Enrollment Data (e.g., DEERS)	Provide data on entire patient population	Data not available for many measures of interest; data may not be regularly updated
<b>Special Study Data</b>		
Patient management forms (i.e., forms specific to the CPG)	Provides guideline-specific data; provides reminders to staff	Incomplete data if forms are not completely filled out for all patients
Chart abstraction	Provides detailed clinical data on appropriateness and outcomes of care	Costly; time intensive
Patient surveys	Captures patient perceptions of guideline implementation and health status	Costly; time intensive; one point in time; uncertainty about validity and reliability

*Figure 1: Data Collection Methods*

### How often should the MTF collect data?

There is much work to accomplish in order to successfully implement a CGP. Remember that data collection is not the goal; rather, it is a tool to help guide the process, ensure events occur as planned, and measure outcomes that justify the effort. Deciding how frequently and thoroughly to collect data is an important component of the MTF implementation process. The CPG working group for data collection will want to draft a plan (when, what, how) for data collection and analysis during the planning phase, even if the plan needs to be changed during the process.



## What are some of the pitfalls in interpreting data?

Data needs to be turned into useful information in order to assist decision-makers. There are several issues to keep in mind when the MTF analyzes the data it has collected.

- **Causality:** Guideline implementation can lead to either increases or decreases in rates of referrals, prescriptions, etc. For example, an expected decline in referral rates due to better primary care management of a disease may actually increase referrals because of better diagnosis. An increase or a decrease in a measure should not be considered either good or bad until alternative interpretations have been thoroughly considered.
- **Subjectivity:** Raw numbers of procedures, prescriptions, referrals, etc. will not tell you whether these were “appropriate” courses of action. Such determinations will require reference to an established benchmark or the judgment of experienced clinicians.
- **Missing Data:** Missing data can lead to erroneous conclusions. For example, if the denominator in an equation is erroneous, missing or incomplete, rates or percentages will be wrong. Surveys that use convenience samples, have low return rates, or are improperly constructed may not reflect the group’s true feelings.

## What is the best method for reporting data?

Decide early in the planning process what types of reports will be prepared and in what format. Keeping the target audience in mind will assist you in making these decisions.

- **Implementation Team Progress Reports:** Reports for monitoring the implementation team’s progress can be tracked by GANTT Charts or other simple chart design:

Essential Activities	Jan	Feb	Mar	Apr	May	Jun	Responsible Parties

Figure 2: GANTT Chart format

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- Reports to Physicians and other medical officers: Individual clinicians should receive periodic reports on how they and their team are performing, compared to all other providers, without identifying those other providers. (If a small MTF assigns all patients with a condition, e.g., diabetes, to one provider, this type of report would be invalid.)
- Reports to MTF Command: Like other management reports, these reports should be succinct, summarize the key findings, highlight the implications of the findings, and discuss recommendations for action. Data displayed through graphic means can be effective in presenting comparative information on indicator performance, either across MTFs or over time.

### Summary

Clinical Practice Guidelines have been shown to dramatically improve the delivery of healthcare services in many cases. However, thoughtful planning is still required in order to minimize disruptions and concern during the transition to guideline recommendations.

Comments and additional questions on Clinical Practice Guidelines can be forwarded to the Population Health staff at:

<http://www-nehc.med.navy.mil/hp/pophealth/PopStaff.htm>

